# *Teucrium pilbaranum* (Labiatae), a new species from the Pilbara, Western Australia

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## Abstract

*Conn, Barry J. (Royal Botanic Gardens, Mrs Macquaries Road, Sydney, NSW 2000, Australia) 1999.* Teucrium pilbaranum *(Labiatae), a new species from the Pilbara, Western Australia.* Telopea *8(3): 299–303.* **Teucrium pilbaranum**, a small subshrub with tripartite leaves, has non-persistent linear prophylls that are replaced by white hairs. A full description of *Teucrium pilbaranum*, habitat and typification notes, botanical illustration, and a key to the named species of *Teucrium* occurring in Western Australia are provided. *Teucrium integrifolium* is recorded in Western Australia for the first time.


## Introduction

Although the genus *Teucrium* consists of c. 300 species, there are only about 13 species in Australia (Conn 1992). Recent collections by Andrew Mitchell from the Pilbara (Fortescue Botanical District) of Western Australia revealed a relatively common undescribed species. With the description of this new species, in this paper, there are now eight named species of *Teucrium* occurring in Western Australia (Western Australian Herbarium 1999). However, the broad species concepts currently applied to the Western Australian *Teucrium* species probably do not usefully describe the observed morphological variation. This suggests that a full review of the genus in the State is required.

Terminology follows Conn (1984), except for modifications to inflorescence terminology as used by Conn (1995).

## Taxonomy

**Teucrium pilbaranum** *B.J. Conn*, **sp. nov.**

*T. albicaule* Toelken foliis tripartitis similis sed ramulorum pilis biramosis, foliis majoribus (10–20 mm longis, 2–4 mm latis) et pedicellis brevioribus (3–4 mm longis) differt.

Type: Western Australia: Pilbara (Fortescue Botanical District): about 30 km W of Mulga Downs Homestead, on track to Boundary Bore (22°06'30"S, 118°15'31"E), *A.A. Mitchell PRP733*, 8 Sep 1995 (holo PERTH 4604342; iso KARR, NSW 426453).

Upright subshrub to c. 0.2 m high, annually producing erect branches from a thick woody root stock. *Branches* ± quadrangular, often with opposite sides of internode slightly concave (in section) from between leaf bases to next lowest node, also slightly ridged laterally, especially on young branchlets, glabrous, except moderately hairy near nodes and basal internodes; hairs unequally 2-branched (shortly stalked), retrorse, ± appressed or hairs simple and spreading (at nodes), slightly curved, c. 0.1 mm long (rarely to 0.3 mm long at nodes), white; sparsely glandular. *Leaves* tripartite or less frequently deeply trilobed (lobes as short as 2.5 mm and as narrow as 1 mm), sessile, dull pale green, non-aromatic; *lamina* segments narrowly obovate, 10–20 mm long,

2–4 mm wide, with length c. 5 times width, distance from base of maximum width c. 0.7 times total lamina length; abaxial surface densely glandular (glands sessile, hemispherical), glabrous or sparsely hairy, particularly on midrib (hairs curled, to 0.3 mm long), margin always sparsely hairy; adaxial surface sparsely to moderately glandular, glabrous or sparsely hairy distally; margin entire; apex ± obtuse, appearing subacute because margin strongly recurved; venation distinct, midvein slightly raised on abaxial surface. *Inflorescence* a frondose racemiform conflorescence, 4–8-flowered, appearing as single flowers in axils; uniflorescence monadic. *Podium* 3–4 mm long, glabrous. *Prophylls* opposite or subopposite, not persistent, linear, 1–1.5 mm long, to c. 0.2 mm wide, inserted approximately midway (propodium c. 2 mm long; anthopodium 1.5–2 mm long, with propodium 1–1.3 times anthopodium), flattened, with white persistent hairs at base (0.2–0.3 mm long). *Calyx* green, campanulate; outer surface glabrous or with occasional hairs, particularly on lobes, midveins ± prominent, inner surface glabrous; *tube* 1.5–2 mm long; *lobes* equal, triangular, 1–2 mm long, 0.8–1 mm wide at base, with length 1–1.3 times width, apex subacute, slightly apiculate. *Corolla* 5.5–6.5 mm long, white (presumably); outer surface sparsely to moderately hairy, hairs to 0.3 mm long, antrorse to slightly spreading, moderately glandular; inner surface densely hairy in tube, hairs spreading, 0.3–0.5 mm long; *tube* 1.5–2 mm long; *abaxial median lobe-pair* spathulate, c. 3.5 mm long, 2–2.5 mm wide, with length 1.4–1.8 times width, apex rounded; *lateral lobes* and *adaxial lobe* slightly spathulate to elliptic, 1.5–2 mm long, 1–1.5 mm wide, with length 1–1.5 times width, apex obtuse to rounded. *Stamens* inserted 1.2–1.5 mm above base of corolla; filaments to 8 mm long; anthers 0.4–0.5 mm long, 0.6–0.7 mm wide. *Pistil* 5.5–6 mm long; *ovary* cylindrical obovoid, c. 0.5 mm long, diameter c. 0.5 mm, lobes c. 0.1 mm long, densely hairy distally, hairs to 0.3 mm long; *style* 4–6 mm long; *stigma lobes* 1–1.8 mm long. *Fruiting propodium* extended. *Fruiting calyx* probably enlarged; margin of lobes with base of hair forming an occasional minute tooth. *Mature mericarps* not seen. (Fig. 1).

**Distribution:** this species occurs in the Fortescue River system, Fortescue Botanical District, Western Australia.

**Habitat:** this common perennial herb occurs in a small crabhole plain (clay soil) in a major river floodplain (*Mitchell PRP733*) and in crab-holed drainage floor on margin of a calcrete table (*Mitchell PRP1489*), in open woodland of *Eucalyptus victrix*, with a tussock grassy ground-cover of *Eriachne beuthamii*.

**Etymology:** the specific epithet (viz. *pilbaranum*) refers to the occurrence of this species in the Pilbara of Western Australia.

**Notes:** *Teucrium pilbaranum* is a small subshrub that is characterised by tripartite (less frequently trilobed), sessile leaves; non-persistent linear prophylls that are replaced by small, but distinct, slightly flattened white hairs. The tripartite sessile leaves are similar to those of *Teucrium albicaule* Toelken (eastern Australia), whereas the less frequent trilobed leaves are similar to those of *T. fililobum* Benth. (south-western Western Australia). The affinities of this species are not known.

**Conservation status:** this species is not regarded as rare or endangered. Mitchell describes this species as 'common' in the Fortescue River system (*Mitchell PRP733* & *PRP 1489*; M.E. Trudgen pers. comm., June 1999). Furthermore, additional collections are apparently held at PERTH (M.E. Trudgen pers. comm., June 1999).

**Other specimen examined:** Western Australia: Fortescue: Millstream National Park, Howletts Well, about 11 km SE of Visitor's Centre (21°36'58"S, 117 06'29"E), *Mitchell PRP1489*, 7 Sep 1996 (PERTH 4583728, NSW 426454).

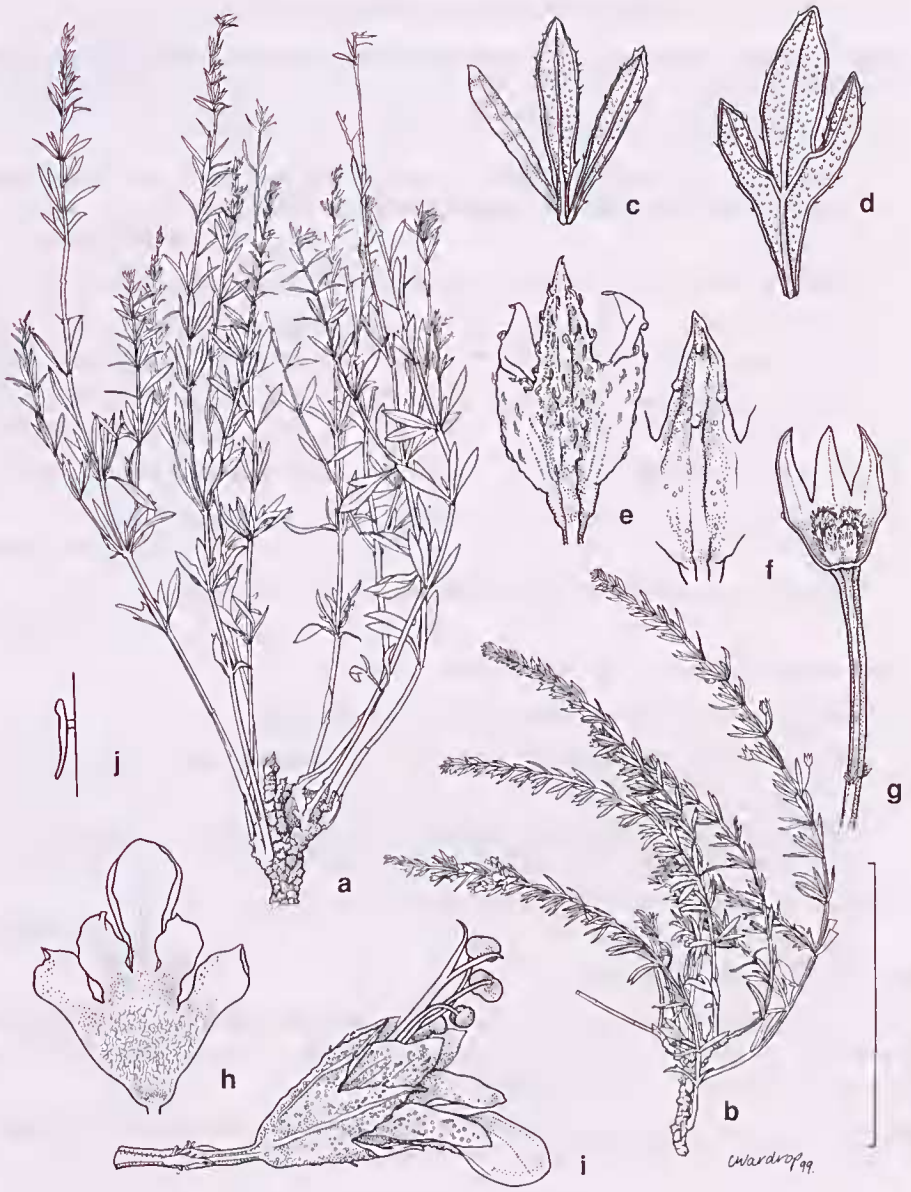


Fig.1. *Teucrium pilbaranum* B.J.Conn. a, habit; b, habit, showing flowers and calyces in fruit (note slightly smaller leaves than a); c, tripartite leaf, with left leaflet showing adaxial surface, whereas central and right leaflets showing abaxial surface and prominent veins; d, trilobed leaf, showing abaxial surface and prominent veins; e, outer surface of flowering calyx, showing hairs on tube and lobes (note: only three lobes drawn); f, section of outer surface of fruiting calyx, showing hair bases, part of tube and one calyx lobe; g, inner surface of fruiting calyx, distally hairy developing mericarps, extended propodium, persistent white hairs at prophyll node (prophylls not persistent); h, open corolla, showing hairy inner surface of tube; i, flower, showing detail of podium, prophylls (including hairs at base of prophyll), calyx, corolla, stamens, style and stigma; j, detail of unequally branched hair (a, c–j *Mitchell PRP1489;* b *Mitchell PRP 3137*). Scale bar: a & b = 75 mm; c & d = 15 mm; e & f = 4 mm; g–i = 7.5 mm; j = 0.3 mm.

### Key to Western Australian Species

1 Leaves entire or toothed, never deeply lobed or tripartite (however, if shortly lobed then lobes ± entire)

2 Leaves flat, at least 10 mm long and more than 5 mm wide

3 Lamina broadly elliptic to slightly broadly obovate, 8–15 mm wide, margin serrate (note: lobed juvenile leaves may be present at base) ..... T. **grandiusculum**

3* Lamina narrowly ovate to narrowly elliptic, 1–6 mm wide, margin entire

4 Branches and leaves glabrous, or very sparsely hairy (hairs ± spreading), glaucous; flowers 2–5 per leaf axil ..... T. **integrifolium**

4* Branches and leaves hairy (hairs retrorse), not glaucous; flowers solitary, three per leaf axil ..... T. **racemosum**

2* Leaves variously and often strongly recurved, up to 5 mm long and to 3 mm wide

5 Corolla pale yellow, much longer than distinctly campanulate calyx ..... T. **myriocladum**

5* Corolla white, not much longer than distinctly tubular calyx ..... T. **eremaeum**

1* Leaves tripartite or ± deeply lobed almost to midrib

6 Leaves tripartite or divided into 3–5 narrow linear lobes

7 Branches with ± patent to spreading hairs throughout; corolla white or yellow ..... T. **fililoboum**

7* Branches with ± appressed T-shaped hairs on basal internodes and ± spreading hairs at nodes, otherwise glabrous; corolla white ..... T. **pilbaranum**

6* Leaves ± deeply pinnately lobed with 2–5 lobes in upper half ..... T. **sessiliflorum**

**Teucrium integrifolium** Benth.

A recent collection from Argyle Downs Homestead (*Mitchell 3188*) is regarded as a narrow-leaved form of *T. integrifolium*. This species is previously known from Queensland and the Northern Territory.

**Specimen examined:** Western Australia: Hall: Adjoining buildings at Argyle Downs homestead (16°38'54"S, 128°46'00"E), *Mitchell 3188*, 6 July 1993 (BROOME, PERTH, NSW 297943).

## Acknowledgments

The botanical illustration of *Teucrium pilbarauum* was skilfully drawn by Catherine Wardrop (NSW). Peter Wilson (NSW) kindly checked the Latin diagnosis.

## References

Conn, B.J. (1984) A taxonomic revision of *Prostanthera* Labill. section *Klanderia* (F.v. Muell.) Benth. (Labiatae). *J. Adelaide Bot. Gard.* 6: 207–348.

Conn, B.J. (1992) *Teucrium*. Pp. 662–664 in Harden, G.J. (ed.), *Flora of New South Wales*, vol. 3. (New South Wales University Press: Kensington).

Conn, B.J. (1995) Description of inflorescence axes in the genus *Logania* R.Br. (Loganiaceae). *Kew Bull.* 50: 777–783.

Western Australian Herbarium (1 July 1999) *FloraBase* — Information on the Western Australian flora. Department of Conservation and Land Management. (http://www.calm.wa.gov.au/science/florabase.html).

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